<table>
<thead>
<tr>
<th>Lecture</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction to Computers, Turing Machine, C++, C++ Code Structure, Scope of Variables &amp; Memory Allocation, Command Line Arguments, Coding Convention, Functions &amp; Methods, C++ Modules, OOP, C++ Datatypes, C++ Operators, Control Flow, C++ STL, I/O Streams, C++ Function Templates, Inheritance &amp; Polymorphism, etc. Review of Software Development, Structured Programming,</td>
</tr>
<tr>
<td>2</td>
<td>Functions &amp; Methods, C++ Modules, Overview of OOP, set/get methods, Constructor/Destructor</td>
</tr>
<tr>
<td>3</td>
<td>C++ Language syntax - coding through C++ language OOP concept is language independent array, vector, pointers, references, loop, control flow, data types, arithmetic operators, logical operators C++ 'this' pointer 'static' keyword sorting algorithms function in C++ storage classes and duration</td>
</tr>
<tr>
<td>4</td>
<td>function call stack &amp; activation record function templates Standard Template Library recursion recap: C++ pointer and reference, control structures, repetition statements array class template vector class template uses of 'static' in various situations</td>
</tr>
<tr>
<td>5</td>
<td>big O notation, efficiency of an algorithm sort &amp; search 'pointer' operator, 'address of' operator sizeof operator introduction to exception-handling</td>
</tr>
</tbody>
</table>
C++ class, a deeper look
operator overloading
inheritance
polymorphism
constructor & destructor
composition
friend function and friend classes
dynamic memory management
create a custom array class
'cast' operator
conversion constructor
Inheritance
polymorphism
recap: operator overloading subjects
inheritance hierarchy
public, protected, private inheritance
polymorphism
virtual function & dynamic binding
virtual destructor
'final' member function and class
abstract vs concrete classes
pure virtual function
the triple indirection
make utility and make file
Standard Template Library (STL)
Containers and Iterators
common iterator functions
types of iterators
iterators with sequences
vector, deque, list
associative containers
container adapters
C++ Standard Library Algorithms
Algorithm, Iterator, Container
Design Patterns,
the final project
the final project
Reading Assignments

C++ How to Program Chapter 1, and class study material

C++ How to Program Chapter 2, 3, and class study material

C++ How to Program Chapter 3, 4, and class study material

C++ How to Program Chapter 5, 6, and class study material

C++ How to Program Chapter 7, 8, and class study material
C++ How to Program Chapter 9, 10, and class study material

C++ How to Program Chapter 11, and class study material

C++ How to Program Chapter 12, and class study material

C++ How to Program Chapter 15, and class study material

C++ How to Program Chapter 16, and class study material

C++ How to Program Chapter 13, 14, and class study material

class study material